

REMARKS

Claim 14 has been amended to correct a typographical error, where claim 14 did not refer back to the preceding claim 13 but referred to a non-existing claim 15. The amendment to claim 14 finds support in various parts of the specification, for example, at page 3, lines 1-4, and in claim 4, as it was originally filed. The paragraph starting on page 1 at line 4 has been replaced herewith, in order to update the status of each of the listed related applications, wherein U.S. Patent Application Serial No. 10/175,130 has now issued as U.S. Patent No. 6,648,047 and pending U.S. Patent Application Serial No. 10/068,021 is now abandoned. Fig. 1 has been amended by adding a locking bar 44 and Fig. 3 has been amended by adding shading lines on the framing material 64. Support for these drawing amendments are provided below. No new matter is introduced by these amendment. Favorable reconsideration of this application is respectfully requested in light of the above amendment and the following detailed discussion.

Drawings Objections

The Examiner has objected to Fig. 3 by asserting that Fig. 3 uses the reference numeral 64 to denote the frame material. However, insofar as illustrated in Fig. 3 there is no discernible structure which could represent the frame material as denoted by the reference numeral 64.

In response to this objection, the applicant respectfully requests to amend Fig. 3 to discern the frame material 64 by placing shading lines on the frame material, which, as illustrated, is

within the panel frame 62. This amendment finds support at page 6, lines 19-23, where it teaches, "The panel frame 62 preferably includes a frame material 64 which attracts and holds the removable decorative panel 60 to the panel frame 62." Thus, no new matter has been added.

The applicant respectfully submits that the above-stated change to Fig. 3 clearly discerns the frame material 64 from the panel frame 62. However, if the Examiner would prefer different language for the term "frame material", the applicant would consider such an amendment. Withdrawal of this objection to Fig. 3, and allowance thereof are respectfully requested.

Claim Rejections – 35 U.S.C. § 112

1. The Examiner has rejected claims 3 and 14 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner asserts that:

Claim 3 is indefinite for it sets forth the embodiment of the folding panel assembly as drawn to figure 1 as having a locking bar, wherein, only the embodiment of the folding panel assembly as drawn to figure 2 is disclosed as comprising the locking bar.

The Examiner further asserts that claim 14 is indefinite for it does not refer back to a preceding claim.

In response to the Examiner's rejection of claim 3, the applicant respectfully requests to amend Fig. 1 by adding a locking bar 44 thereto, which finds support in the originally filed Abstract of U.S. Patent Application Serial No. 09/524,339, wherein it teaches that, "In another

embodiment, the security system includes a locking bar that allows the panels to stay in the expanded position.” It is the applicant’s position that the embodiment being referred to in this portion of the originally filed Abstract comprises a single door embodiment, since the very next sentence in the originally filed Abstract teaches that another embodiment is that of the two opposing panel doors, where it states, “In addition, two opposing panel doors can be mounted to a wall frame using spring-loaded hinges to allow the panel doors to swing open and closed.”

Regarding the rejection of claim 14, the applicant has amended claim 14 to refer back to claim 13. As stated above, the amendment to claim 14 corrects an inadvertent typographical error, where claim 14 did not refer back to the preceding claim 13 but instead referred to a non-existing claim 15.

The applicant respectfully submits that claims 3 and 14 have been thoroughly reviewed and Fig. 1 and claim 14 have been amended for clarity. No new matter has been added with these amendments. For all the reasons described in the preceding paragraphs, the applicant respectfully submits that claims 3 and 14 meet all the requirements of 35 U.S.C. § 112, second paragraph. Accordingly, reconsideration and withdrawal of the rejections of claims 3 and 14, and allowance thereof, are respectfully requested.

2. The Examiner has rejected claims 5 and 11 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. The Examiner asserts that claims 5 and 11 contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make

and/or use the invention. The Examiner further asserts that it is not known the structure and the software/hardware interface which comprises the computer controlled display.

It is the applicant's position, however, that the application of, and the making of the software and hardware interface associated with computer controlled displays, is well known by those skilled in the art. For example, the technology associated with flat screen displays and electronic computer displays have existed for many years. Attached herewith is Exhibit A, which is a history (that began in 1936) of electron luminescence (available from Limate, Incorporated of Taipei, Taiwan R.O.C. that can be found on the World Wide Web at www.limate.com).

In regard to the Examiner's assertion that the structure of the claimed inventions of claims 5 and 11 are not enabled, it is the applicant's position that the structure of the panels of claims 5 and 11 are enabled. The applicant respectfully submits that, respectively, the physical structures of independent claims 1 and 7, from which claims 5 and 11 depend, are the structures of claims 5 and 11. Those structures, as they pertain to claims 1 and 7, are panels that fold and expand across an opening. In addition to the physical structure, the panels of claims 5 and 11 would be electrically connected to each other to form the display, through electrical connectivity means that are well known in the art.

In other words, it is the applicant's position that the claimed inventions of claims 5 and 11 are not limited by the software, hardware, or electrical connectivity, which as stated above are common knowledge, but, respectively, by the limitations placed on the panels capability to expand and collapse, across the aperture, by claims 1 and 7.

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For all the reasons described in the preceding paragraphs, the applicant respectfully submits that claims 5 and 11 meet all the requirements of 35 U.S.C. § 112, first paragraph. Accordingly, reconsideration and withdrawal of the rejection of claims 5 and 11, and allowance thereof, are respectfully requested.

Claim Rejections – 35 U.S.C. § 102

The Examiner has rejected claims 1, 2, 6-9, 12, and 13 under 35 U.S.C. § 102(b) as being anticipated by Bruneau (U.S. 4,431,044, hereinafter Bruneau). The Examiner asserts that Bruneau discloses the claimed folding panel assembly including a plurality of folding panels 6 hingedly mounted to vertically-oriented frames, first and second locking bars 30, 31.

Regarding independent claim 1, from which claims 2 and 6 depend, the applicant finds that claim 1 specifically claims at least the limitations of: a plurality of folding panels, wherein a first panel is mounted to the first vertically-oriented frame, and each successive panel is supported solely by its preceding panel.

After carefully studying Bruneau, the applicant can find nowhere in Bruneau where at least these limitations are taught or suggested. Instead, the applicant finds that Bruneau is directed to a security shutter that is resistant to forced entry through an opening that has upper and lower brackets 10 which cooperate with locking elements 8 to unite panels 6 with a frame, which includes an upper runner 1 and a lower runner 2, in a closed position of the shutter (see, for example, the Abstract). Bruneau connects the panels 6 to roofs and floors (see, for example,

column 3, line 18 to column 4, line 22 and Figs. 1-3). Therefore, Bruneau does not solely support each successive panel by its preceding panel.

Further, it is the applicant's position that if Bruneau had each successive panel supported solely by its preceding panel, then Bruneau's apparatus would not function to resist forced entry, which is a requirement of Bruneau apparatus.

Likewise, regarding amended independent claim 7, from which claims 8, 9, 12, and 13 depend, the applicant finds that claim 7 specifically claims at least the limitations of: first and second folding panels, wherein the first and second folding panels are mounted, respectively, to the first and second vertically-oriented frames, and each successive panel of each set of panels is supported solely by its preceding panel.

After carefully studying Bruneau, the applicant can find nowhere in Bruneau where at least these limitations are taught or suggested. Instead, the applicant finds that Bruneau comprises a single plurality of panels that, as mentioned above in the response to the 35 U.S.C. § 102 rejection of claims 1, 2, and 6, is directed to a security shutter that is resistant to forced entry through an opening that has upper and lower brackets 10 which cooperate with locking elements 8 to unite panels 6 with a frame, which includes an upper runner 1 and a lower runner 2, in a closed position of the shutter (see, for example, the Abstract). Bruneau connects the panels 6 to roofs and floors (see, for example, column 3, line 18 to column 4, line 22 and Figs. 1-3).

It is the applicant's position that if Bruneau had each successive panel supported solely by its preceding panel, then Bruneau's apparatus would not function to resist forced entry, which is

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a requirement of Bruneau apparatus. Further, Bruneau does not teach first and second folding panels, which are limitations of the claimed invention.

Regarding claim 13, the applicant finds that claim 13 specifically claims at least the limitations of: the folding panel assembly further comprising at least one hinge disposed between each of the frames and its respective first panel to support and pivotally mount its respective plurality of folding panels. After thoroughly studying Bruneau, the applicant can find nowhere in Bruneau where at least these limitations are taught or suggested.

Therefore, the applicant respectfully submits that independent claims 1 and 7, and dependent claim 13 of the claimed invention are not anticipated by Bruneau, as the inventions defined thereby are not identically disclosed in Bruneau, as required by 35 U.S.C. § 102(b). Consequently, claims 2 and 6, which depend from claim 1, and claims 8, 9, 12, and 13, which depend from claim 7 are, likewise, not anticipated under 35 U.S.C. § 102(b) by the Bruneau patent, and that claims 1, 2, 6-9, 12, and 13 should be allowed over Bruneau. Accordingly, favorable reconsideration of claims 1, 2, 6-9, 12, and 13 is respectfully requested.

Claim Rejections – 35 U.S.C. § 103

The Examiner has rejected claims 4 and 10 under 35 U.S.C. § 103(a) as being unpatentable over Bruneau in view of Dykes (U.S. 5,598,667, hereinafter Dykes). The Examiner concedes that Bruneau does not set forth a decorative or descriptive panel. However, the Examiner asserts that Dykes discloses a folding panel assembly comprising decorative or

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descriptive panels 30a-d, wherein, to incorporate this teaching into the folding panel assembly of Bruneau for the purpose of aesthetics would have been obvious to one of ordinary skilled in the art.

The applicant responds to these rejections of claims 4 and 10 by noting that claims 4 and 10, respectively, depend from claims 1 and 7. As a result, the applicant respectfully traverses the rejection of claims 4 and 10 as being unpatentable over Bruneau in view of Dykes. These claims, respectively, depend from claims 1 and 7, and are patentable at least on that basis. The rejections should therefore be withdrawn.

Further, the applicant agrees with the Examiner's concession that Bruneau does not teach a decorative or descriptive panel, as is claimed in both claims 4 and 10. In addition, the applicant can find nowhere in this 35 U.S.C. § 103(a) rejection of claims 4 and 10 where the Examiner addresses the further limitations of claims 4 and 10 that the decorative or descriptive panels be removably attached to the folding panels. After thoroughly studying the Dykes reference, the applicant can find nowhere in Dykes where Dykes teaches removably attached panels. For at least these reasons, claims 4 and 10 should be allowed over Bruneau in view of Dykes.

Further, after thoroughly reading the Dykes reference, the applicant can find no disclosure in Dykes to at least overcome the above-stated shortcomings (i.e., for claim 1, a plurality of folding panels, wherein a first panel is mounted to the first vertically-oriented frame, and each successive panel is supported solely by its preceding panel, and for claim 7, first and second folding panels, wherein the first and second folding panels are mounted, respectively, to the first

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and second vertically-oriented frames, and each successive panel of each set of panels is supported solely by its preceding panel) of Bruneau or any combination of the teachings of Dykes and Bruneau, which would teach or suggest the invention defined by independent claims 1 and 7, from which, respectively, claims 4 and 10 depend.

Therefore, claims 4 and 10 of the present application are patentable over Bruneau in view of Dykes, as the inventions defined thereby are not suggested within either Bruneau or Dykes, nor is there any suggestion or motivation to modify or combine these references' teachings in order to teach or suggest the claimed limitations, as required by 35 U.S.C. § 103. Consequently, the applicant respectfully submits that claims 4 and 10 of the present application are patentable over Bruneau in view of Dykes, and that claims 4 and 10 should be allowed over Bruneau in view of Dykes. Accordingly, favorable reconsideration of claims 4 and 10 is respectfully requested.

Double Patenting Rejection

The Examiner has rejected claims 1-14 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims of U. S. Patent Nos. 6,378,592 and 6,648,047. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are drawn to a single inventive concept. The Examiner has noted that timely filed terminal disclaimers in compliance with 37 CFR § 1.321(c) would overcome this rejection.

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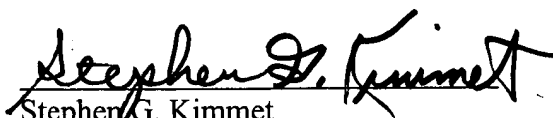
The applicant submits herewith "Terminal Disclaimers to Obviate a Double Patenting Rejection Over a Prior Patent." The submission of these Terminal Disclaimer is believed to overcome the rejection of claims 1-14 under the judicially created doctrine of double patenting.

CONCLUSION

For all the reasons described in the preceding paragraphs, the applicant respectfully submits that the present application is now in condition for allowance. Accordingly, a timely action to that end is courteously solicited.

If the Examiner has any remaining questions or concerns, or would prefer claim language different from that included herein, the favor of a telephone call to the applicant's attorneys is requested.

Respectfully submitted,


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PREFACE

EXHIBIT A

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Electron luminescence (EL), which was first discovered by Dr. Destria in 1936, has sixty-year history. Due to the recent development of solid-state chemistry and pellicle semiconductor technology, EL Flat Panel Display was thought much gradually.

According to the luminescent material, EL has two types, one is organic and the other is inorganic, and the latter was mainly researched in the past. Now, after the operating life-span has been broken through, organic EL has the value to be industrialized. EL can be used in all kinds of OA machines such as the word-processor and personal computer, and the navigating terminal for vehicles as well. In addition, the full-color EL display has reached the level of practicality, in the near future, we long for the enhanced high definition full-color EL display.

1. Evolution of Luminescence

Owing to the development of IT, Flat Panel Display (FPD) became the mainstream of the electronic applied products, including all kinds of electric appliances such as televisions, fascias, watches, ad fascias etc. Now there are three kinds of technology about FPD, namely Liquid Crystal Display (LCD), Plasma Display Panel (PDP) and Electron luminescent Display (ELD). LCD has been used a lot in the portable computer because of its low cost and electricity-consumption, but, it still has many defects like bad visual angle, low speed, complex structure, unable to be enlarged and high operating costs etc. However, ELD has many great merits like good visual angle luminescing without heat, flexible screen, shortness and portability, which make i have more potentiality in the future.

Electron luminescence (EL) is a kind of physical phenomenon, which converts electricitic energy to light energy. EL was first discovered in 1936 by the Germany scientist Dr. Destria. He had a Zns stick immersed into mercury electrode t luminesce, but at that time the transparent electrode was not discovered. Until 1951 the discovery of the transparent electrode indirectly made EL become the design of the flat lamp-house. But, there were problems with the luminescent intensity and life of EL, so it still could not be applied practically. In 1974, Inoguchi created the filmy EL structure with double insulative layers, which could solve the problems of intensity and life, so it became the new research field. Table 1 is the developing history of EL Flat Panel Display.

The word, Flat Panel Display, first appeared in 1960s. There are many kinds of FPD now made by Sharp Co. in Japan or Planar systems Co. in US, and the latter is the filial company of Tektronix established in 1983.

Sharp Co. first produced the monochromatic 320' 240 EL display, which was used in the first-generation portable computer. Planar Co. produced panchromatic ACTFEL (AC Driven Thin Film EL) 320' 240 dots flat panel display, which aroused much attention of display operators at that time. Now, Planar Systems has commercialized panchromatic EL display, and in 1993 it produced the first prototype of full-color EL display.

EL is a simple and reliable luminescing method with sixty-year history. But, since i concerns complex application of solid-state chemistry and stuff, it was not though much in the past. With the maturation of solid-state technology in recent years, EL display will play the important role of the market in the future.

Table 1-1 shows the developing history of flat panel display.

1936	EL's inventor	G. Destriau
1947	Powder type ACEL	Sylvania
1968	LUMOCEN ZnS doped with the rare-earth flouride	Bell Lab,kahng
1974	Double insulating layer ZnS:Mn ACTFEL panel	Sharp
1978	Samples,600units,1500fL,1500hrs	Sharp
1980	ALE,ZnS:Mn,1000fL,8 lm/w	Lohja
1984	Products,3000Uunits/month (640× 400dots)	Sharp
1985	Multi-colour EL in alkaline-earth Sulfide thin film devices SID'85	S. Tanaka et al.
1986	SrS:Ce,K,memory	H. Kobayashi et al.
1986	Products, (512× 256,640× 240dots) ZnS:Mn	Planar
1986	Products, (640× 240dots) ZnS:Mn	Lohja
1987	Thin-film (edge-lighting) printer	Westinghouse
1987	Organic Thin-film EL devices	Kodak,Tang
1988	Products,ZnS:Mn, 6000Uunits/month,10" (720× 400dots),6.8billion Yen	Sharp
1988	Full-color ACTFEL(320× 240dots)	Plansr
1991	Lohja & Planar joint company to develop full color ACTFEL	Planar et al.
1992	Products,ZnS:Mn,2000units/month	Sharp

1993	Products, the first commercial multi-color (R.G.B.) ACTFEL (640× 480dots) SID'93	Planar Int'l
1993	Reported a prototype full-color ACTFEL (640× 480dots) in VGA format, SID'93	Planar
1994	DC thin film organic EL devices by evaporation	Yamagata University
1995	Planar systems has permitted a 1995 fiscal year budget of R& D for ACTFEL by United States Display Consortium	Planar

2.principle

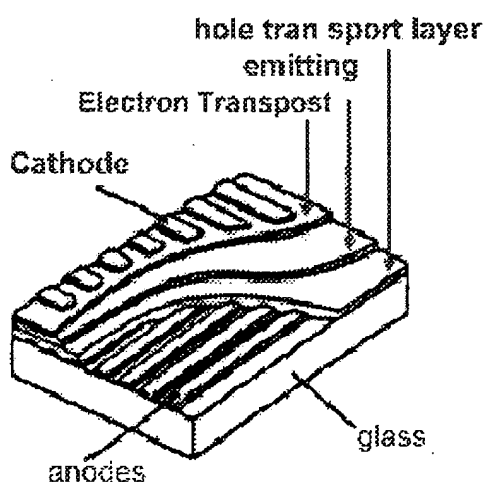


Chart 2-1 ELD Basic structure

Chart2-1 shows the basic structure of Electron luminescent display (ELD), it is mainly made of the electrode material, the insulative material and the luminescent material (the fluorescent material). Usually the fluorescent material can be classified as two kinds: organic and inorganic, the latter is researched more frequently. EL is similar to semiconductor. The fluorescent material is mainly made up of the luminescent center formed by the host and the proper dopant. At present, the developed host material is mostly II - VI family ionic compound, approximately including Ca, Sr, Ba (IIA family) or Zn, Cd, Hg (IIB family) with S, Se (VI family) as the host material. Luminescent color is decided by the dopant, which is mostly transitional metal like Mn, Cu, Ag and lanthanide (Eu, Sm, Tb). Table 2-1 shows the different color formed by the different dopants mixed with ZnS as the host. As luminescence concerns stuffing cation vacancy, and if the dopant is not bivalent metal, we must add something univalent or trivalent to poise the charge. Usually they are halogen like F, Br, Cl, we call them Co-activator.

Table 2-1

Shows the different color formed by the different dopants mixed with ZnS as the host

材料	在可見光範圍之主要發光波長尖峰 (Å)	顏色
PrF ₃	6513, 6565, 4937, 5020, 7410, 6350	白
NdF ₃	6000, 5400	橙
SmF ₃	6490, 7080, 6015, 6100, 5650	橙紅
EuF ₃	6110, 6485, 4875, 5875	粉紅
TbF ₃	5425, 4875	綠
DyF ₃	5740, 5710, 6635, 4835	黃白
HoF ₃	6575	粉紅
ErF ₃	5245, 5480, 6615, 5338, 7600	綠
TmF ₃	4770, 4810, 6520, 6650	藍
YbF ₃	6000	紅
MnF ₂	6750	橙紅

Luminescence results from the electron in the outermost layer of the luminescent center's dopant collided by the accelerated electron, leading to electron transference, then the electron of this layer is promoted to the energy phase which can result in the crystallization of the host, forming the free electron, at the same time the ionization happens in the luminescent center, finally the combination of the free electron and the ionized luminescent center releases the energy difference by luminescing.

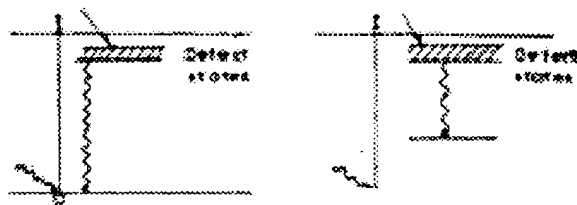


Chart 2-2 ELuminescence preface

The formation of luminescence of EL needs about 10V/cm or above adscititious voltage, this article will explain the relationship among the adscititious voltage, the luminance of EL element and the luminescent efficiency, which is described in chart 2-3. The chart can be divided into three areas, the first one is the area of low voltage (I), the conductive electron cannot inspire the electron in the outermost layer of the luminescent center because of the low adscititious electric field, EL element will not

luminesce. When the adscititious voltage reaches the area of middle voltage(II), the conductive electron is accelerated to be the thermion, which may inspire the luminescent center. EL element will luminesce. At the same time in this area, the energy of thermion will increase due to the increase of voltage, and the luminescent intensity and efficiency will also increase. When the adscititious voltage in the area of high voltage(III), the thermion in the luminescent layer will cause insulative destruction. Although the adscititious voltage increases, the electric field in the luminescent layer will not increase, neither will the energy of the thermion. Therefore, the luminescent intensity and efficiency will hold the line.

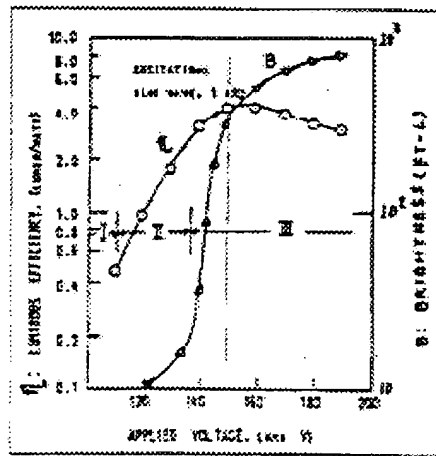


Chart 2-3 The luminance of EL element and the luminescent efficiency

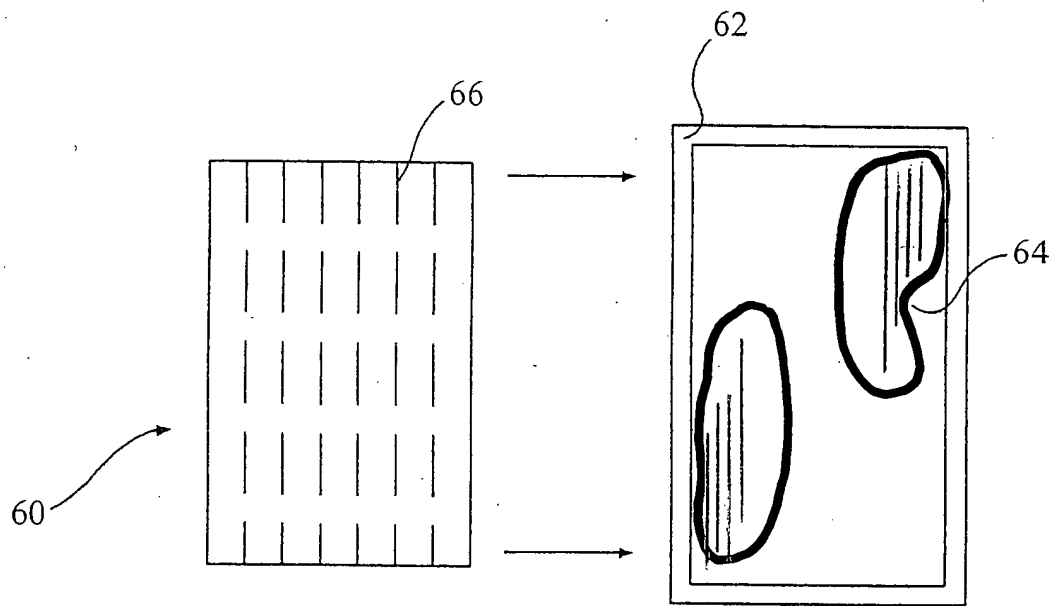


Fig. 3

